CLAIMS:

1.   An isolated or recombinant DNA molecule encoding

(a)   a proteoglycan expressed in retinal tissue having a membrane anchor sequence and a leucine-rich repeat motif comprising the amino acid sequence: x-x-(I, V or L)-x-x-x-x-(F, P or L)-x-x-(L or P)-x-x-L-x-x-(L or I)-x-L-x-x-N-x-(I or L) where "x" represents any amino acid, wherein an impairment in function of the proteoglycan is associated with a complete CSNB phenotype;

(b)   the amino acid sequence of SEQ ID NO: 2;

(b)   the amino acid sequence of SEQ ID NO: 2 with conservative amino acid substitutions; or

(c)   an amino acid sequence which is at least 50% homologous to SEQ ID NO: 2.

2.   The DNA molecule of claim 1 which encodes an amino acid sequence which is at least 70% homologous to SEQ ID NO: 2.

3.   The DNA molecule of claim 1 wherein said DNA is cDNA.

4.   .

5.   .

6.   .

7.   .

8.   The DNA molecule of claim 1 wherein said DNA has the nucleotide sequence corresponding to SEQ ID NO:1 or naturally occuring allelic variants of SEQ ID NO:1.

9.   An isolated or recombinant polynucleotide comprising a nucleotide sequence corresponding toe SEQ ID NO: 1, substantially homologous to SEQ ID NO:1 or a

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nucleotide sequence that hybridizes under highly stringent conditions to a hybridization probe having a nucleotide sequence of SEQ ID NO:1 or the complement of SEQ ID NO:1.

10. The polynucleotide of claim 9 wherein said polynucleotide is selected from the group comprising:
   (a) RNA;
   (b) cDNA;
   (c) genomic DNA; and
   (d) synthetic nucleic acids.

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11. An expression vector comprising one of the DNAs or polynucleotides of claims 1, 2, 3, 8, 9 or 10.

12. A cultured cell comprising the expression vector of claim 11.

13. A cultured cell comprising a DNA sequence or polynucleotide of one of claims 1 to 10, operably linked to an expression control sequence.

14. A cultured cell transfected with the vector of claim 11, or a progeny of said cell, wherein the cell expresses a mammalian GPI-anchored small leucine-rich proteoglycan.